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From Modality to Tonality: The Reformulation of Harmony and Structure in Seventeenth-Century Music

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Introduction

After nearly a century of gradual infiltration of modality, which had reigned unchallenged for centuries, its replacement, the musical organization known as tonality (to be defined later), monopolized music from the late 1600s to the early 1900s. During its prominence, tonality stood alongside a march of confidence in the Western mindset. A faith in human reason shaped Western history until events of the early twentieth century cast it into doubt. The order and perfection pursued in tonal music might be seen as analogous to the same order and reason pursued in human action. For one, tonality's inception mimicked the empirical attitude of the Enlightenment. Jean-Philippe Rameau, the first to lay down the principles of tonality in *Traitè de L'armonie* (1722), invites comparison to Enlightenment thinkers in philosophy and science. Like Isaac Newton or Renè Descartes, Rameau harnessed a humanist faith in the power of reason to explicate what he believed to be universal governing principles for music.[1] Faith in human reason, born in the Renaissance and matured during the Enlightenment, permeated attitudes behind defining historical events that followed. The agents of the American and French Revolutions, industrialization, and nationalism knowingly or unknowingly inherited this unyielding human confidence. Humanity thought it had "figured it all out," and the tonal structures from Vivaldi and Bach to Haydn and Mozart musically embody this pride in human reason. Music of the Romantic era, championing individuality and nature at the onset of the industrial revolution, stretched the boundaries of the tonal system but still adhered to it.

A confluence of shifting attitudes at the turn of the twentieth century cast doubt on the faith in human reason fostered since the Enlightenment. Scientific developments, from evolutionary theory to relativity theory, marginalized humanity's preeminence and cast doubt on

[1] Joel Lester, *Compositional Theory in the Eighteenth Century,* 91.

the idea of a fully rational world. Modern industry put its finishing touches on the machine that would drive the First World War. As such, conventional artistic models no longer sufficed to express what had become an uncertain and irrational human condition. Picasso's *Guernica* (1937) distorts proportion and perspective to portray the chaos and lack of reason behind the German and Italian bombings during the Spanish Civil War. In this same manner, composers such as Arnold Schoenberg, Igor Stravinsky, and Béla Bartók, abandoned, or at least reinterpreted tonality, once the musical analogue of reason, in search of more relevant approaches.

As such, the tonal system reflects the prevailing confidence of the Enlightenment, called into question at the turn of the twentieth century. Although this generalized traversal through centuries of history demands clarification, it is probably fair to state that tonality's correlation to centuries of Western thought affirms its stature as a shaper of history. It comes as no surprise that numerous scholars have undertaken studies investigating the origins of tonality, and in this study, I have undertaken to show with greater precision how, when, and, to some extent, why this monumental transfer of musical power occurred.

Tonality is the system of musical organization that involves the orientation of diatonic triads towards a referential tone, or pitch class.[2] It makes use of the diatonic major and minor scales. Regarding tonality, Bryan Hyer, in *Grove Music Online*, states:

> "[Tonality] gives rise, moreover, to abstract relations that control melodic motion and harmonic succession over long expanses of musical time. In its power to form musical goals and regulate the progress of the music towards these moments of arrival, tonality

[2] Bryan Hyer, "Tonality," ¶ 1.

> has become, in Western culture, the principal musical means with which to manage expectation and structure desire."[3]

Modality, an older system out of which tonality grew, consists of various diatonic scales with specified ranges and designations on important pitches. Modality arose between the eighth and ninth centuries to organize the body of liturgical chant in the Roman Catholic Church, and it remained the central music theoretical construct until the late seventeenth century.[4]

The evolution of tonality from the older system of modes encompasses several centuries and various genres and styles of music. Scholars have looked to the sixteenth century to trace tonal origins, perusing the popular song repertoire of various nationalities and the sacred vocal polyphony from such composers as Josquin and Palestrina. Thoroughbass practice, opera, and the growing instrumental repertoire serve as seventeenth-century focal points for identifying the origin of tonality. Each of these repertoires from the 1500s and 1600s along with their contemporary theoretical systems constitutes a fertile ground for investigation in its own right. I have undertaken to highlight the significant steps in the direction of tonality, and as a result, I have addressed these repertoires and theories in varying amounts of detail, focusing most specifically on seventeenth-century music. I start with a comparison between central features of the modal and tonal systems and follow with a discussion of seventeenth-century theoretical writings which observe and also implicitly promote the shift. A look at significant pieces from the seventeenth-century clarifies the search and shows when and how full tonality arose.

To trace the gradual accumulation of tonal characteristics throughout the seventeenth century is no simple task. The repertoire of the seventeenth century has eluded performers, historians, and theorists. This is due in part to the great flux in musical practice throughout the

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[3] Hyer, ¶ 11.
[4] David Hiley, "Mode," ¶ 2-3.

century. At the turn of the century, modal vocal styles dominated. By the end of the century, tonal instrumental styles had secured supremacy. Most of the music of the century conforms neither to modal analysis nor tonal analysis. A close look at this music in flux affords a careful understanding of the shift to tonality. It bridges the gap between the clearly defined modal and tonal systems. It reveals not only key historical steps towards tonality but also key features of tonality itself. In the repertoire of the seventeenth century, harmonic considerations gained precedence through the adoption of thoroughbass and a reformulation of harmonic rhythm. With this new harmonic emphasis, composers from Monteverdi to Corelli developed discreet tonal regions and linked them through directed harmonic motion to establish tonal hierarchies locally and globally.

Modality and Tonality Compared

As a basis for comparison, I will outline central characteristics and discuss crucial similarities and differences between the modal and tonal systems. Modal organization, both in monophony and polyphony, is primarily melodic. The traditional eight mode system consists of four underlying diatonic scales that can be divided into two forms, authentic and plagal. To these eight modes, Heinrich Glarean (1547) and Gioseffo Zarlino (1558) respectively added the Aeolian and Ionian modes (Ex. 1).[5] Each mode is distinguished by its *final*, the tonal center of the mode. The authentic and plagal modes differ in their *ambitus*—the range and notes contained in the mode. The ambitus of an authentic mode spans the octave from its *final*, and its *reciting tone*, often the most prominently occurring note after the final, falls on the fifth of the octave.

[5] Joel Lester, *Between Modes and Keys,* xiii-xiv.

The ambitus of each plagal mode falls on the fourth below its authentic counterpart, and incidentally, the reciting tones occur not on the fifth but on the third or fourth.[6]

The aforementioned features of the modes are melodic relationships, and from these melodic features, the differences between the modes as well as tonal major/minor scales arise. For example, in the Dorian mode, a melody may freely outline the stepwise ascent between D and A. In the Phrygian and Lydian modes, this is not possible without encountering the tritone, the *Diabolus in musica*.[7] The Lydian mode, in particular, was dead on arrival, almost immediately obtaining a fixed B-flat in chants.[8]

In polyphonic composition, the melodic basis of the modes, as well as general voice leading considerations independent of mode, form the basis for structural organization. Zarlino, in *Istitutione harmoniche* (1558), an authoritative consolidation of sixteenth-century music theory, wrote that the mode of the tenor delineated the structure of a polyphonic composition. This mode was maintained by cadences to certain degrees throughout the composition, and as a general rule, these cadences fell on the first, fifth, and third degrees of the mode.[9] Cadencing on the final, fifth, and third created an emphasis on the modal final as well as the authentic and plagal reciting tones, resulting in the blurring of authentic and plagal forms. This is affirmed in Zarlino's advice that imitative entries of voices in polyphonic composition outline authentic and plagal ambitus. The ambitus of the soprano duplicated that of the tenor, with the same relationship between the alto and bass. The tenor and soprano might outline the authentic ambitus in different octaves, while the bass and alto outlined the plagal ambitus a fourth below

[6] Lester, *Between Modes and Keys*, xiii-xiv.
[7] Lester, *Between Modes and Keys*, xv.
[8] Susan McClary, *Modal Subjectivities*, 211.
[9] Gioseffo Zarlino, *Istitutione Harmoniche,* "Part four," *55*.

the tenor and soprano.[10] As a result, procedures for polyphonic composition were born of melodic procedures, but in the blurring of a distinction between authentic and plagal variants, the number of modes already reduces to half the original number.

To Susan McClary, the various modal idiosyncrasies were a powerful tool for expression and organization, especially to the sixteenth-century Italian madrigalists. Claudio Monteverdi, one of these madrigalists and a pioneer of opera at the turn of the seventeenth-century, organizes his opera *L'Orfeo* (1607) on D Dorian. The "idyllic pastoral world" lives within the D octave, embellishing the fifth, A, with a B-flat inflection. Then, as a disruption to stability, the main character moves to G with a "hard" B natural and strong tendency to a C region. This move to C ultimately affects a return to D Dorian through A, resolving the original tension and instability.[11] This may be seen as an example of modal "ethos," where certain modal gestures and their harmonic implications evoke varying emotions. David Schulenberg draws a line of succession from modal ethos to the Baroque Doctrine of Affections—the basing of a section or piece of music on a specific emotion.[12]

With an emphasis on melodic organization, the vertical or harmonic aspect of modal composition was secondary. Carl Dahlhaus asserts that the triad was only an aesthetic result formed from the cohesion of independent voices, not a compositional starting point.[13] Indeed, not until 1612 did Johann Lippius, in *Synopsis musicae novae*, first conceive the triad as a unit in and of itself.[14] Certain voice leadings resembling chord progressions (Ex. 2), like IV-V-I, can be more logically understood with the explanation that the top two voices were an age-old interval progression from a sixth to an octave while the bass was a secondary part, leaping up a fourth to

[10] Zarlino, 92-93.
[11] McClary, *Modal Subjectivities*, 202-03.
[12] David Schulenberg, *Music of the Baroque*, 28.
[13] Carl Dahlhaus, *Studies on the Origin of Harmonic Tonality*, 110.
[14] Dahlhaus, 114.

create the final octave consonance.[15] I will impose triadic analysis on modal music as a tool for comparison to tonality, keeping in mind that this music was conceived and understood in a more linear (and modal) fashion.

As an example of modal melodic organization, take the *Kyrie* from Giovanni Pierluigi da Palestrina's *Missa Aeterna Christi munera* (1590) (Ex. 3). The piece is in the Ionian mode, transposed to F, and divides into three sections, corresponding to the divisions in the text: *Kyrie eleison, Christe eleison, Kyrie eleison*. The first section (mm. 1-13) revolves around the final, F, with entries outlining the authentic octave (F-C-F, mm. 1-3) and a final cadence on F (mm. 12-13). The second section (mm. 14-29) begins with a center on F until moving to an emphasis of the fifth degree (C) through continual cadences on C with the help of a B-natural leading tone. These cadences emphasize the C through A minor chords (m. 22 and m. 24 in lower voices) and a C major chord (m. 29) which projects the overall section as grounded in C. The third section (mm. 30-45) returns to a grounding in F. As such, Palestrina's *Kyrie* reflects a melodic organization consistent with Zarlino's advice on structure. It centers foremost on the final, with a secondary emphasis on the fifth degree, or reciting tone. These groundings are melodic, articulated on pitches, not chords.

While modal composition pursues a melodic organization, the major/minor keys of the tonal system pursue a harmonic orientation. This fact manifests itself in that the difference between major and minor keys is determined by the quality of the third above the tonic. The tonic triad, not a single note final, forms the basis of a key.[16] Rameau, in *Traitè de l'harmonie,* asserted the precedence of harmony over melody in composition. He states: "No matter what melodic progression is used for each individual part, the voices will join together to form a good

[15] Dahlhaus, 107-08.
[16] Lester, *Between Modes and Keys*, xvii.

harmony only with great difficulty, if indeed at all, unless the progressions are dictated by the rules of harmony."[17] These "rules of harmony" constitute one of tonality's central features: the use of diatonic chord progressions to create a hierarchy at the top of which sits the tonic. Rameau clarifies this by saying that one should form a "fundamental progression" before writing a melody. Upon this progression, triads are built with the result that the progression will follow a "diatonic course."[18]

As such, tonality is a system where diatonic chord progressions establish a "key." The diatonic element of tonality is crucial; it ensures that the triads in a harmonic progression stay within the key, strengthening their relation to the tonic. While the modes are constructed on the diatonic scale, harmonizations of a modal melody may be constructed from any array of consonant sonorities, often using local leading tones, and the result is that these harmonizations do not necessarily observe the diatonic scale. Of course, both tonal and modal progressions make use of local leading tones. However, the leading tones in tonal progressions are part of secondary tonicizations which ultimately serve the tonal hierarchy. Modal progressions do not affect tonicizations or modulations, and the often close use of leading tones causes an ambivalence of tonal direction, even though such progressions emphasize certain melodic degrees and produce a variety of harmonic colors.

Certain motion in the roots of a progression leads to an establishment of tonal hierarchy, and along with the triadic grounding in diatonicism, this root motion distinguishes tonality from modality. The definition for tonal progressions given by Greg A. Steinke, in *Harmonic Materials in Tonal Music: A Programmed Course, Part 1*, provides a central basis for comparing modal and tonal harmonies. Steinke defines a tonal progression as harmonic movement where the root

[17] Jean-Philippe Rameau, *Treatise on Harmony*, 152.
[18] Rameau, 152-53.

moves down in fifths, up in seconds, or down in thirds. This definition pertains to root movement, so inversions of chords do not affect a progression. For the sake of brevity, we are equating certain intervals, so root movements up a fourth, up a seventh, and up a sixth are considered the same as down a fifth, down a second, and down a third, and vice versa. I will refer only to movement in fifths, thirds, or seconds. An important principle within this rule is that the tonic may progress to another chord in *any* direction in order to *begin* a progression, and this most often means that the tonic will initially move to the dominant.[19] As such, I-V-I is a valid tonal progression. This also explains how modulations to the dominant fit into the scheme of tonal progressions, and I will address this circumstance shortly.

At the risk of sounding a few centuries old by evoking a scientific generalization to explain a musical concept, I wish to stress the intuitive importance of downward fifth motion in asserting the tonic. When the root moves down a fifth, it can be seen as the result of a gravitational pull from the fifth below, and this pull allows the resolution of the tension built on the upper fifth in, say, the dominant. The initial movement from tonic to dominant establishes the tension, and the movement down a fifth resolves it. As an example, classical sonata form exploits on a large scale the tension and resolution between tonic and dominant.

In terms of modulation, the gravitational pull becomes stronger. Consider the following root progression, with C as a tonic: C-G-D-G-C (all major triads), but suppose C modulates to G and G modulates to D. The motions from C to G and G to D are both upward fifths, seemingly contradicting the definition of tonal progressions. However, if G is named a new tonic, then, by the tonic's freedom to move in any direction, it may progress in an upward fifth to D. If the modulations occur through secondary dominants which is very likely, the sequence—C-(D)-G-(A)-D-G-C—would in fact be progressive: up a second, down a fifth, up a second, and down

[19] Greg A. Steinke, *Harmonic Materials in Tonal Music*, 304.

three fifths. In the overall sequence of ascending fifths, tonic-dominant polarity is established first between C and G and compounded by another polarity between G and D. With this degree of tension established, the remainder of the progression, D-G-C, built on falling fifths, projects a gravity towards the tonic, C. The result is a pyramid structure, with initial upward movement leveled out by an equal distance of downward movement.

Of course, this analogy of gravitational pull is a subjective interpretation of a subjective musical matter, but perhaps the diatonic circle-of-fifths sequence will serve as the most persuasive example of a tonal entity exhibiting gravitational pull. In a complete tonal circle-of-fifths sequence (in the key of C major, Table 1), the root usually moves down in successive fifths (left to right on the table), highlighting each triad within the octave and culminating in the final movement from V-I. An important tonal feature is the diminished fifth formed between the third and seventh degree, which demands resolution to the major third dyad on C and E—just as in the resolution of the dominant seventh chord. If a circle-of-fifths progression were attempted upward from C (right to left on the table), the final cadence would be plagal (IV-I), resulting in a weaker sequence overall. The upward fifths do not facilitate an arrival on the dominant as the penultimate sonority, and it is for this reason that downward fifths form a stronger progressive motion.

The concept of progression applies to all levels of structure, from local harmonies to overall tonal plans. This does not go to say that all harmonic movement in tonal music is progressive. Within a key, harmonic movement may be "retrogressive," consisting of root movement up a fifth (or down a fourth), down a second, or up a third, but as shown in the example of an upwards circle-of-fifths sequence, these retrogressions lack the forward drive of a progression. This definition of tonal progressions rests on the observation that the bulk of

harmonic progressions (in the general sense) throughout common practice tonality are progressive (in the forward driving sense).[20]

Modal harmonic movement, due to its melodic conception, tends to be both progressive or retrogressive, involving root movement up or down fifths, seconds, or thirds.[21] This movement, especially fifths in both directions, can create a symmetry about the tonic that actually obscures it as a center.[22] In the tonal case, upward fifths are successive tonicizations or modulations culminating in a descent to the tonic. In the modal case, harmonic motion is less directed, and roots tend to vacillate around the tonic. If we return to the middle section of the *Kyrie* from Palestrina's *Missa Aeterna*, we observe the following succession of triads in measures 23-25 (inversion disregarded): C-F-G-Am (or F)-G-F. Both moves from G to F (beat 3 of m. 23 to beat 1 of m. 24 and beat 3 of m. 24 to beat 1 of m. 25) are retrogressive—down a second. This may seem like no major tonal upheaval, since tonal progressions abound throughout other areas of the section. The whole of measures 25-29 "progresses," as shown in the key of F major. However, the downward motion from G to F, specifically in m. 24, presents ramifications for the overall structure by reintroducing the pitch content of "F major"—namely B-flat—despite the melodic pursuance of C. The appearance of a B-flat major triad affirms F major shortly after (beat 3 of m. 26) and casts doubt on the efforts of the B-natural to tonicize C beyond a micro-progression. It is important that the pitch content introduced belongs to F, a subdominant region of C. To return to C from F, an upward fifth would be required, and this occurrence turns the tonal gravity on its head. Charles Rosen puts the matter succinctly: "The subdominant weakens the tonic by turning it into a dominant. . . The [tendency of tonal music towards the dominant] can be perceived immediately in the formation of the diatonic major scale [on C]. . .which uses

[20] Steinke, 300.
[21] Peter J. Burkholder, *A History of Western Music*, 395.
[22] Henry Burnett and Roy Nitzberg, *Composition, Chromaticism, and the Developmental Process*, 97.

the root of only one triad in the subdominant direction [F], but of the first five triads on the sharp or dominant side [G, D, A, E, B]."[23]

While the middle section of the *Kyrie* emphasizes C melodically, a harmonic establishment of C fails due to the affect of retrogressive motion on the structure. The imposition of a "tonic" at multiple levels of this middle section is problematic. Suppose this retrogressive movement were extended, with a shift from an F tonal center to a B-flat tonal center and beyond. The resulting harmonic movement would be a "plagal" circle-of-fifths sequence—a backwards tonal progression. Moreover, if this progression did not remain diatonic to F, with successive movement in *perfect* fifths and no diminished fifth (in this case, between B-flat and E), a return to F would be impossible. Extensive movement into subdominant regions counterbalances harmonic motion to the dominant, creating the symmetry about the tonic.

Another important modal feature is the B-flat/B-natural cross-relation. This exemplifies how modal composition can subvert its diatonic foundation. Since harmony is not a starting point for modal composition, triad harmonizations on the same scale degree in modal compositions may be major or minor; their quality is not fixed by constituent diatonic pitches.[24] Examples of such inflections, even in the increasingly tonal music of the seventeenth century, are just enough to maintain a "modal" sound.

Theoretical Perspectives

In many ways, tonality is a subset of the modal system, making use of only two modes (major and minor) as well as a selection of harmonic entities which are "tonally progressive." While the diversity of modality arises from the ethos of its twelve (or eight) modes and the

[23] Charles Rosen, *The Classical Style*, 24.
[24] Burnett and Nitzberg, 97.

harmonic colorations of certain melodic areas or single degrees the mode, the novelty of tonality, on the other hand, arises from the expansion and prolongation of its selected modal elements, creating the potential for immense musical structures. Theoretical treatises throughout the seventeenth century observe this selection or consolidation of the modal system and impart an understanding of how composers might have conceived their increasingly tonal works. Gregory Barnett asserts that Italian composers referred to the eight psalm tones from the liturgical tradition of the Catholic church as a means for tonal organization. These psalm tones, or church keys, were subsets of the modes and melodies in their own right, each having specific characteristics, but these church keys did not hold to the plagal and authentic distinctions of mode nor did they abide by other conventions of modal theory.[25] Italian theory, due to its attachment to the Catholic church, maintained a speculative categorization of the modal system but approached a consolidation of "keys" or "tones" based on the eight psalm tones. Adriano Banchieri, in *Cartella musicale* (1614), gave the eight church keys as a follows: d, g (one flat), a, e, C, F (one flat), d (one flat), and G.[26] Keys in lower case letters have minor thirds above the final while keys in upper case letters have major thirds above the final. The keys with one flat, on G, f, and d, were transpositions to fit practical performance considerations.[27] Banchieri associated the church keys solely with liturgical practice, leaving the twelve modes to associate with secular music, but to Lorenza Penna, in *Li primi albori musicali* (1672), the eight church keys had become the only modern "modes" in use.[28] Giovanni Bononcini, in *Musico Prattico* (1673), reiterated the twelve modes, but listed seven of Banchieri's eight keys as the most common. (He excluded the church key on "e.") The ordering of tonalities in collections of

[25] Gregory Barnett, *Bolognese Instrumental Music*, 251-52.
[26] Gregory Barnett, "Tonal organization in seventeenth-century music theory," 420-21.
[27] Barnett, "Tonal organization," 420-21.
[28] Imogene Horsley, "Symposium on Seventeenth-century Music Theory: Italy," 55.

sonatas and dances from the second half of the century adheres to the church keys, reflecting how, in Italian practice, the eight church keys usurped the modes as a means for organization.[29] The distinction between the modes and church keys remains blurry, however, since Italian theorists used the term "tuono" synonymously, referring in different contexts either to the modes or to the more specific church keys.[30] Still, Barnett sustains the notion that Bononcini's seven keys were the bread and butter of tonal organization in the Italian instrumental music of the late seventeenth century, and the tonal plans of Arcangelo Corelli (1653-1713), an important contributor to tonality, conform to Bononcini's system, making use of various transpositions of the seven keys.[31]

Similarly, French theorists Guillaume-Gabriel Nivers (1667) and Jean Rousseau (1678) saw the church keys as common tonalities, but Rousseau presented a further consolidation. He presented the church keys as a dichotomy depending on the quality of the third above the final. The third was either "majeure" or "mineure."[32] This conclusion represents an increasingly harmonic understanding of key and a belief in the common use of only two modes. English theorists similarly arrived at this categorization, and possibly due to their distance from the confines of traditional modal theory, they did so earlier than their Continental counterparts.[33] Thomas Campion, around 1618, identified major and minor keys as "sharp" or "flat" keys, as did John Playford in 1674.[34] Italian theory would finally confirm this in 1708 with Francesco Gasparini who, in *L'armonico pratico al cimbalo*, states, "In order not to dwell too long on what is not essential for us [full treatment of the modes], and in order not to inflict on the mind a

[29] Barnett, "Tonal organization," 426.
[30] Barnett, "Tonal organization," 420.
[31] Peter Allsop, *Arcangelo Corelli*, 102. Allsop asserts that it is unknown which system Corelli knew about or used (100). However, Bononcini's and Penna's systems, due to their prominence, are likely candidates.
[32] Barnett, "Tonal organization," 434.
[33] Barnett, "Tonal organization," 436.
[34] Barnett, "Tonal organization," 438.

double burden, I have hit upon a device that will permit my ingenious player to understand without too much confusion what is involved in the treatment of each key with its proper accompaniments. It suffices to state that any composition whatsoever is formed either with the major third or with the minor."[35] By the turn of the eighteenth century, then, through the familiar language of the modes or church keys (or with their own language altogether, in the English case), theorists throughout Europe had witnessed the emergence of the tonal major and minor.

In a similar manner as the selection of the modes to tonal major and minor, theorists discarded certain modal cadences to reflect the most common cadences and related key areas of a tonal composition. The selection in this case was minimal, however, as there is actually much overlap between important modal and tonal cadences. For example, Zarlino's exhortation to cadence on the first, fifth, and third (in order of decreasing priority) coincides with tonal patterns in minor keys, and his 1-5-3 cadence theory became precedent for seventeenth century theorists.[36] Numbers rather than Roman numerals will be used here to clarify that these cadential theories did not necessarily apply to harmonies and did not imply a fixed triadic quality. Also, the lines between the numbers mean the priority of cadences, not a sequence or progression. Zarlino's 1-5-3 cadence pattern did not fit every mode, however, and he recognized this by mentioning the tendency of the Mixolydian and Phrygian modes to cadence on the fourth degree.[37] This tendency in particular reflects an inherent predisposition of modal organization towards the subdominant rather than the dominant, and this kind of tendency seventeenth-century theorists discarded. The cadence plans in Angelo Berardi's in *Il perchè musicale* (1693) shows Zarlino's 1-5-3 template in the "minor" modes but also the following cadential pattern, 1-5-6, in the authentic Mixolydian and Ionian modes. This pattern approaches the common

[35] Francesco Gasparini, *The Practical Harmonist at the Harpsichord*, 65-66.
[36] Dahlhaus, 228.
[37] Dahlhaus, 227.

progression of tonal works in a major key, a pattern Corelli used extensively. Modal cadences uncommon to tonality still appear, such as the 1-5-3 pattern in the plagal C-Ionian mode.[38] Lorenzo Penna, in *Li primi albori musicali* (1684), presents a more condensed cadence plan. Except for the 1-4-7 pattern of D-Aoelian, in Penna's system, the minor modes D-Dorian G-Dorian and A-Aeolian follow the 1-5-3 pattern, while the major modes C-Ionian, F-Ionian, and G-Mixolydian the 1-5-4 pattern.[39] The 1-5-4 pattern, with emphasis on the subdominant rather than the relative (the sixth degree), reflects a less common tonal plan, but the establishment of virtually two patterns—one for major and one for minor—was a necessary consolidation for tonality to arise. By this point, theory on the locations of common cadences in modes or church keys matched that of archetypal tonal cadences and modulations to related key areas. The selection of modal cadences to reflect the increasingly common tonal patterns needed not be large, showing some compatibility between modal and tonal structures.

Despite this compatibility, harmonic considerations needed to surpass melodic considerations to affect a full conceptualization of tonality, and the widespread adoption of thoroughbass in the early seventeenth century contributed significantly to this shift. The continuo player's need to create harmonies, not melodies (the soloist covered that), in the heat of performance would have necessitated this shift. This would have affected how musicians thought about the cadence patterns discussed above. Rather than the contrapuntal confluence of two or more lines at the unison or octave, the cadence became a succession in bass movement upon which the player furnished harmonies.[40]

Seventeenth-century writers of thoroughbass treatises attempted to establish guidelines for how to harmonize figured and unfigured bass lines in performance. While the number of

[38] Dahlhaus, 231.
[39] Dahlhaus, 233.
[40] Barnett, "Tonal organization," 448.

existing figurations increased throughout the seventeenth century, making the task cumbersome to theorists, their guidelines helped to engender a standardized, tonal harmonic practice.[41] In *Syntagma Musicum* (1619), Michael Praetorius advised the use of 6/3 harmonies above bass notes on "mi." (In the shifting hexachord system of Guido of Arezzo (991/992-1050), still in use in the seventeenth century, "mi" could occur on multiple scale degrees, such as E and B in the key of C, for example.) The rest of the bass notes would have a 5/3 sonority. The result was the use of I^6 instead of iii and V^6 instead of vii^o.[42] Although I^6 and iii as well as V^6 and vii^o assume functional equivalence, I^6 and V^6 are more idiomatic to tonal progressions, and Praetorius tacitly encouraged their prevalence. This guideline, however, did not suffice for minor keys and, overall, was limited in scope.[43] As time progressed, writers continued to devise cookie cutter patterns for certain bass motions (Ex. 4).[44] Such resulting progressions were I-vii^{o6}-I^6, vii^{o6}-I^6-$V^{4/2}$, and I^6-ii^6-V—also standard tonal motions. Arranged in sequence, these micro-progressions could produce a lengthier drive to the cadence.

In a further effort to simplify and systematize thoroughbass practice, writers around 1700 proposed certain harmonizations over each scale degree within the octave. The given models reflect the diatonic supremacy of the scale on which they are based by keeping the use of local leading tones to a minimum. Especially with the chordal conception of thoroughbass, such octave harmonizations reflected an increasing sense of diatonic, functional harmony. Antonio Bruschi, in *Regole per il contrapunto e per l'accompagnatura del basso continuo* (1711), presented harmonizations for an ascending G major scale (Ex. 5). The harmonic movement is, by and large, progressive, and the triads are entirely diatonic. Bruschi's verbiage reflects a value in

[41] Joel Lester, "Thoroughbass as a Path to Composition," 150-51.
[42] Lester, "Thoroughbass," 149.
[43] Lester, "Thoroughbass," 149.
[44] Lester, "Thoroughbass," 150.

establishing a key. He states: "It is. . .necessary to know that, in whatever key one goes, the same rule of assigning consonances is to be observed in all of them."[45] François Campion presented a similar model in *Traité d'accompagnement et de composition, selon la regle des octaves* (1716) which he called the "Rule of the Octave" (Ex. 6). It is interesting to note, in his model, the frequent use of seventh chords as well as a "secondary dominant" to tonicize the dominant.[46] Of course, the Rule of the Octave could not accommodate every nuance of thoroughbass, but like others that came before it, this rule limited and standardized the harmonic vocabulary in a way favorable to tonality. Seveteenth-century theory oversaw the selection of tonal characteristics from modal (or psalmodic) foundations, a selection driven significantly by the harmonic emphasis of thoroughbass practice.

The Music

Using writings in music theory to understand musical practice falls prey to the chicken or egg dispute. Theorists recognize and systematize existing practices, and in this sense, theory is the chicken—not the true source of origin. At the same time, theory is the egg, providing a basis for the training of performers and composers and directly affecting new music making. While seventeenth-century theory observed and passed on an increasingly harmonic tonal idiom, the music itself reveals how composers reformulated certain structural and rhythmic procedures which approached a pervasive tonal organization. Roots of this reorganization lie in a pattern found in sixteenth-century popular music. This pattern was an ostinato ground bass, which Richard Taruskin asserts carried certain tonal implications and may have contributed to a new way of understanding the notes on the page. Diego Ortiz, in his *Trattado de glosas* (1553),

[45] Barnett, "Tonal organization," 442.
[46] Lester, "Thoroughbass," 151.

provided templates for recercadas (short, instrumental improvisations) over "cantos llanos," or repeated bass lines accompanied with chord progressions.[47] The idea was that a performer on lute would repeat the chord progression until the soloist (in Diego's treatise, a violist) completed his or her improvisation. One ostinato progression, Ortiz's *Recercada segunda* on the *passamezzo moderno* (Ex. 7), was Mixolydian due to the F-natural and contains retrogressive motion down a second from G (mm. 5-6). However, the use of an F-sharp to create an authentic cadence on G and the repetition of this pattern during performance created a tonal emphasis on G. While falling short of a major-minor tonality, the ostinato bass was "the first indisputably harmony-driven force in the history of Western music-making." Taruskin continues: at the penultimate measure of the *passamezzo*, the harmonic rhythm speeds up to usher the cadence. The concept of harmonic rhythm is unique to tonality, especially when it articulates a structural element such as a cadence. Taruskin distinguishes this instrumental tradition, which had been "cooking behind the curtain for centuries" before "frozen" and codified by Ortiz (and others), from the "discant and modal basis" of "literate music-making."[48] Decades before Taruskin, Edward Lowinsky similarly viewed the secular instrumental realm as a hotspot for innovation, since "in ecclesiastical music intimately tied to plain chant the old modes reigned supreme."[49]

With the invention of monody at the turn of the seventeenth century, harmonic expansion became increasingly important to a composition. The harmonic-rhythmic drive found in the sixteenth- century ostinato bass, once a specific feature of a specific genre, became useful to monody, and this new harmonic rhythm permeated every seventeenth-century genre. This feature, made practical through the use of figured bass, is one of the central unifying characteristics for music in the 150 year span known as the "Baroque Era." Susan McClary

[47] Richard Taruskin, *The Oxford History of Western Music*, Vol. 1, 620, 625.
[48] Taruskin, 627-28.
[49] Edward Lowinsky, *Tonality and Atonality in Sixteenth-Century Music*, 75.

asserts that in the modal system, the relationship between melodic and harmonic elements is one-to-one, where structural organization relies on the linear traversal of the melody. As stated before, harmonizations added an "interpretive dimension" to the melody. An example of this is a common modal harmonization of a descent through the species of fifth on G, or the stepwise descent from D to G (Ex. 8).[50] According to McClary, "the density of information projected by the melodic lines and the rapidity of harmonic motion [in the one-to-one organization of modal style] make the style somewhat cumbersome for purposes of projecting normal speech."[51] In the same manner as the *passamezzo* bass, monody allowed for the expansion and embellishment of a melody within discrete harmonic units through a slowing of harmonic rhythm. The melodic-harmonic relationship was no longer one to one. As works in the monodic style sought increasing length, cadences and leading tones would be employed to prolong other regions besides the tonic.[52] These regions were not modulations, since they often abided by modally based logic, but they were the beginnings of hierarchical organization towards a tonic through movement to related key areas. At the local level, however, the sixteenth-century ostinato bass proved a suitable model for the establishment of local harmonic regions.

McClary traces the progression towards increasing hierarchical structure from several of Monteverdi's madrigals composed before 1600, *L'Orfeo* (1607), the late madrigals, and *L'incoronazione de Poppea* (1642). While McClary's thorough study of Monteverdi can only be encapsulated here, two examples—one selected from his first opera and one from his last—effectively illustrate her point. The first is "Ecco pur" from *L'Orfeo* (Ex. 9), where McClary asserts that although the overall structure relies on the common linear descent from D to G, the

[50] Susan McClary "The Transition from Modal to Tonal Organization in the Works of Monteverdi" 9-10.
[51] McClary, "The Transition," 176-77.
[52] McClary, "The Transition," 11.

descent is prolonged through slightly more distinctive harmonic regions (Ex. 10).[53] The first four measures center on G minor, while the E-flat and C in the bass embellish the G minor area. The next four measures (mm. 5-8) appear to move briefly from the key of B-flat to the key of F, with a return to G minor in the final four measures. However, this example as a prolongation of a typical modal pattern, the descent through species of fifth, is difficult to perceive, since the last four measures are an exact repeat of the first four measures, and significant B-flats and D's are present in both. It is exactly this difficulty in distinguishing the underlying melodic structure which shows how larger harmonic organization began to surpass one-to-one melodic organization.[54] In short, Monteverdi stretches out each note in the species of fifth over brief albeit distinctive harmonic regions. This will afford later tonal schemes employing more extensive modulations to related key areas. Still, modal harmonic motion manifests itself in the sequence of harmonic regions (G-B-flat-F-G). The move back to G minor from F major weakens G minor without the leading tone F-sharp. Another way to see this is that the F region is down two fifths from G, weakening the function of D as a dominant one fifth up from G. While "Ecco pur" exhibits a new kind of harmonic expansion, its constituent harmonies are not fully goal-oriented.

The second example discussed by McClary, "Signor, sempre mi vedi" from Act 1, Scene 3 of *Poppea* (Ex. 11), combines two procedures Monteverdi had gradually developed in his madrigals and operas. The first is a multi-sectional form (in this case, three sections), consisting of firmly established tonic areas at the beginning and end. The middle section, in McClary's words, is "structurally dissonant" to "break the tedium" of a continuous tonic. This form creates the possibility for the expansion of a tonal work far beyond what an ostinato bass previously

[53] McClary, "The Transition," 203.
[54] McClary, "The Transition," 203-06.

afforded. The second procedure is the expansion of the constituent sections through lengthier harmonic prolongations within a single key.[55] However, the important innovation beyond these two procedures is that the sections and their constituent harmonies form a progressive structure. "Signor" overall conforms to the definition of tonal progression, traversing first to dominant regions and following with a downward progression in fifths towards the tonic. The first sixteen measures establish the tonic on C. The second section (mm. 16-21) modulates from G to D. Secondary chords, a vii^{o}/G in m. 17 and V^{6}/D in m. 18 affect the modulations, rendering the overall succession of harmonies entirely progressive: C-(F-sharp)-G-(A)-D—down a fifth, up two seconds, and down a fifth. The final section comprises the same phrase stated first on G and then on C. The downward progression of fifths (D-G-C) resolves the tension built from the brief modulations in upward fifths to the dominant and its dominant. At a local level, diatonicism stabilizes the tonic, while harmonic prolongation sustains it. For example, the opening section in C stays in the diatonic C major scale, but "subdominant counterbalance" and the melody's continuous rhythmic activity which serves to dodge the bass's cadential implications create variety within the local diatonic region.[56] It is interesting to note that the subdominant here prolongs a key region, yet it also possesses the ability to interrupt motion to the dominant in a tonal progression.

In the overall key plan, there is no significant retrogression to the subdominant to threaten the pyramid structure of progression to and from the dominant. That actual modulations occur is significant, too, and this was not the case with Palestrina's *Kyrie*. However, just half a measure of local harmonic ambiguity in the middle section, resulting from a divergence from the diatonic scale of the harmonic goal, briefly obscures tonal direction, and this ambiguity is

[55] McClary, "The Transition," 261-62.
[56] McClary, "The Transition," 267-69.

enough to preclude Monteverdi from full tonality.[57] In the middle section (mm. 16-21), Poppea sings a descending sequence of sixteenth notes, moving in step from E to A (mm. 16-18). A tonal analysis of a likely figured bass realization below the sequence (Ex. 11) shows progressive motion to D major. However, the inflected triads (F major and D minor) undermine the ultimate goal of motion: the key of D major (m. 19). I undertook the analysis in G to show the local progression of G to its dominant, D.[58] The F-sharps and C-sharp, (mm. 17-20, respectively), diatonic to D major, aid in creating a harmonic drive towards the D cadence (m. 21), yet the F-natural (m. 18) opens up a subdominant can of worms. The F-natural comes from the pitch content of C major, the subdominant of the subdominant of D, implying a traversal in reverse direction from the dominant and begetting the inflected triads. As a contrast to the aria's beginning and ending sections firmly grounded in C through diatonicism (mm. 1-15 and 25-29), Monteverdi may have sought the tonal obscurity of a deliberately dissonant or developmental middle section. Still, this tiny piece of a traditional harmonic practice sets Monteverdi apart from his successors who will more systematically harness the power of fully diatonically directed progressions. That these modal inflections occur at a low level with respect to the overall structure of the aria may attest to the importance of even short progressions as indicators of a future world of tonal harmony.

Monteverdi's "Signor" exemplifies how tonal principles, such as progressive motion and diatonicism, stood alongside modal principles for several generations, and these types of modal characteristics in compositions continued to separate them from later common practice tonality. Composers had yet to exploit tonal devices consistently. Henry Burnett and Roy Nitzberg

[57] A number of works from the latter half of the nineteenth century are not fully tonal either, such as Wagner's *Prelude to Tristan and Isolde*, yet they expand on the most basic expectations of the tonal system, namely tonic-dominant polarity, which Monteverdi had not fully realized.

[58] Analysis of mm. 16-18 in the key of C may show a better diatonic fit, but a modulation from C directly to D (via V^6/II, m. 18, beat 4) would be unexplainable as a common chord modulation to a closely related key.

interpret Biagio Marini's Sonata Op. 22 No. 1, *Prima* parte (1655), as an example which reflects increasing tonal organization while still possessing modal characteristics (Ex. 12).[59] The structure of the movement consists of tonal regions in descending fifths, just as in "Signor." The overall key is D Dorian, established in the first twelve measures until an inconclusive cadence on A. Burnett and Nitzberg highlight the i-V^6-i-VI-V progression in the D region which allows for a harmonic prolongation of D. The next move is to E (m. 17), the dominant of A. The sequences that follow end in cadences on A (mm. 22, 26, and 28), until the D tonic is finally reaffirmed to end the movement. (The movement ends in D major to point to the next movement, which is in G hypodorian). Burnett and Nitzberg cite the tonal characteristics as the overall movement from tonic (D) to dominant (A) and back to tonic as well as the thoroughly extended tonic region in the beginning.[60] However, in the same way as in "Signor," modal inflections in the sequencing (m. 18 and mm. 24-25) serve no diatonic scale in particular. The result is that the sequences do not drive as strongly to a final cadence point. Still, this piece's strong establishment of the D tonic with movement to its dominant embodies the spirit of tonal organization.

As the Marini sonata (and many other works) suggest, by the last half of the seventeenth century, composers were making use of an overall, tonal skeleton, yet the potential for further harmonic drive within key areas remained. At this point, a widely held notion that Arcangelo Corelli (1653-1713) was the first "tonal" composer comes to the fore. Indeed, from his own lifetime to the present, historians and theorists have praised Corelli for his consistent harmonic practices, later attributing these practices to the success of tonality. Francesco Gasparini (1708) extolled Corelli's control of harmony. Regarding the resolution of ninths to consonances over the bass, Gasparini states:

[59] Burnett and Nitzberg, 99.
[60] Burnett and Nitzberg, 98-101.

> "This practice, followed by the better modern composers, is found particularly in the extremely delightful *Sinfonie* of Arcangelo Corelli, supreme virtuoso of the violin, true Orpheus of our time, who moves and shifts his basses with so much artfulness, care, and grace, using these ties and dissonances, so well controlled and resolved, and so well interwoven with a variety of themes, that one may well say he has rediscovered the perfection of ravishing harmony."[61]

Charles Burney, in his widely-read and influential *General History of Music* (1776), acknowledges the popularity Corelli enjoyed during his lifetime and the value of his music: "…scarce a cotemporary musical writer, historian, or poet, neglected to celebrate his genius and talents; and his productions have contributed longer to charm the lovers of Music by the mere powers of the bow, without the assistance of the human voice, than those of any composer that has yet existed."[62] These sentiments reflect the immediate and lasting recognition of the value of Corelli's music, but Burney did not specifically gauge Corelli's achievements in light of tonality.

Modern historians corroborate earlier praise of Corelli's works—48 trio sonatas, 12 violin sonatas, and 12 concerti grossi—yet frame them within the larger development of tonality. Despite recent efforts to question the Corelli "myth," historians by and large continue to agree that Corelli created a novel sound, and that his innovations can be attributed to his selective, consistent use of certain harmonic progressions available to him, such as the diatonic circle-of-fifths sequence, and the uniformity of his large-scale tonal schemes. It is important, however, not to overlook Corelli's reliance on Bolognese and Roman precedents such as the trio sonatas of Giovanni Battista Vitali. Peter Allsop delineates harmonic formulas identified with the Bolognese school. These formulas included successive 5/3 and 6/3 chords, chains of 6/3s, and 7-

[61] Gasparini, 62.
[62] Charles Burney, *A General History of Music*, 437.

6 or 9-8 suspensions to accompany an ascending or descending scale in the bass. Vitali in particular made extensive use of 7-6 suspensions over "stock" bass formulas (Ex. 13), such as in his Sonata 8 *a2* (1667).[63] It is important to note that the entire pitch content of this sequence is diatonic to the C harmonic minor scale. Such diatonicism maintains the drive toward the final cadence on C, and this differs from the sequences of Marini and Monteverdi which stray from the diatonic scale of the harmonic goal. In contrast to his predecessors, Vitali consistently limited the structural organization of his works to emphasize dominant and relative regions "irrespective of mode."[64] Corelli drew extensively on these approaches in creating his own controlled, consistent tonal plans. Other Bolognese influences were cadential formulas which served to articulate important structural points, including the diminished chord on the sharpened fourth to approach the dominant, used by Maurizio Cazzati.[65] These Bolognese patterns assume much of the responsibility for the "all-pervasive sense of harmonic motion" in Corelli's works.[66]

Despite his firm grounding in precedent, Corelli's consistent style led to a widespread, established notion of tonality. John Walter Hill asserts that, like Vitali, Corelli introduces the accidentals pertaining to one scale or mode early on in a sequence, rendering the sequence completely diatonic to a particular scale.[67] This serves to increase the drive towards specific tonal regions and is devoid of the modal inflections that disrupt the drive. These patterns constitute circle-of-fifths sequences that "fall" to their goal, and Corelli employed them more "conspicuously and copiously" than others. The diatonic circle-of-fifths sequence later became a

[63] Allsop, *'Trio' Sonata*, 170.
[64] Allsop, *'Trio' Sonata*, 170.
[65] Allsop, *'Trio' Sonata*, 286.
[66] Allsop, *'Trio' Sonata*, 233-34
[67] Allsop, *'Trio' Sonata*, 338.

chief identifying component of tonality, and Corelli's works are advocates for its use.[68] Moreover, the way Corelli used these sequences is important, for they always arrive at a cadential formula.[69] This use of sequences effectively delineates important structural points. The sequences of Bononcini, Cazzati, and Vitali far less often end in cadences, falling short in their full potential as harmonic harbingers.[70]

Corelli's use of these harmonic practices results in effective prolongations of tonal areas at local levels or within sections of a piece. They withstand the full scrutiny of tonal analysis. At the higher level, the structural plans for Corelli's movements reflect the tonal hierarchy first utilized by Monteverdi. However, Corelli differs from Monteverdi and his other predecessors in that he nearly always achieves both diatonic tonal prolongation at the local level and tonal hierarchy at the movement level. Allsop observes that 90 percent of the cadences in Corelli's works go either to the tonic or dominant. A remaining seven percent goes to cadences on the relative major or minor. Also, Corelli's preference in minor works for cadences on the relative major conforms to a trend in later tonal works, and this distinguishes Corelli's harmonic language from the Marini Sonata, for example, which cadences on the minor dominant.[71]

A straightforward example of Corelli's harmonic organization is Corelli's *sonata da chiesa*, Op. 3, No. 2 in D major (1689). In the first movement (Ex. 14), the overall structure is a tonal archetype: I-V-vi-I. The first region (mm. 1-4) establishes the tonic until an authentic cadence on the dominant, A. This prepares a restatement of the initial theme in the dominant key (mm. 5-8). The sequences that follow move back through D to a cadence on B minor (mm. 9-12). A quick return to the tonic (m. 13) precedes its placid affirmation until the end of the

[68] Taruskin, Vol. 2, 187-89. I attribute my general appreciation of the circle-of-fifths sequence in tonality found throughout this study to Taruskin's argument on this matter.
[69] John Walter Hill, *Baroque Music*, 338.
[70] Hill, 338.
[71] Peter Allsop, *Corelli*, 104.

movement. The final tonic region asserts the supremacy of the D major scale, as it is almost entirely diatonic. However, this conclusion is by no means monotonous, in contrast with the repetitious ostinato bass on the *passamezzo modern* or other earlier pieces attempting a tonic prolongation with the new harmonic rhythm (not one-to-one) of the Baroque. The variety of the final seven bars rests on the consonance/dissonance alternation of the 7-6 suspensions as well as the brief tonicization of the subdominant through V^7/V (m. 17).

The fugal fourth movement (Ex. 15) mirrors the tonal scheme of the first movement. Table 2 illustrates the overall tonal progression. The movement through key areas is again progressive, from I-V-vi-ii-(V)-I.

While, in this fast movement, some key regions (B minor and E minor) are brief, they fit within the overall goal of the hierarchical structure. Inflected triads, such as B minor/major (m. 28) and E minor/major (m. 32), are too brief to obscure a sense of diatonicism, as they quickly assume their purpose as secondary dominants. Also, worthy to mention is the tonicization of the subdominant (G, mm. 34-35) to broaden the final tonic region on D, as in the first movement. With Sonata Op. 3, No. 2, Corelli projects tonal hierarchy on two levels: within key areas through the use of forward-driving progressions (mainly, downward fifths) and between key areas, asserting the supremacy of the tonic through the overall progression of keys.

While his works exemplified tonal models, Corelli constituted just one part of a diverse Italian instrumental tradition which achieved international influence in different ways. For example, Taruskin asserts that as early as 1683 (only two years after the publication of Corelli's first book of church sonatas), Henry Purcell appropriated the style of Lelio Colista, a Roman contemporary of Corelli, in his own trio sonatas. The second and fourth movements of Purcell's Sonata No. 3 in D minor, follow the model of a tonal fugue, with a tonic-dominant polarity in the

statement of subject and tonal answer and directed circle-of-fifths motion. This format radically departed from Purcell's 1680 fantazias, which exhibited a less tonal, more freely chromatic English style.[72] Purcell was quickly shifting from the older to style to make use of novel tonal sounds from Italy.

A transmission as obscure as that between Colista and Purcell indicates how pervasively the innovations of the Italians spread, but within a few decades, Corelli's work outshined that of his Italian contemporaries, achieving an elevated status as tonal models. Regarding Corelli as the "Orpheus of our time" in Gasparini's thoroughbass treatise is one example. Of seminal importance is Rameau's analysis of the figured bass in Corelli's Op. 5 violin sonatas (1694). In *Nouveau système de musique theorique* (1726), Rameau identified errors in the figured bass of Op. 5 but was careful to mention that the composed parts themselves fit well to his assignment of fundamental bass (read: tonal progression). As a result, the figured bass notation needed adjustment to fit the composition's exemplification of harmonic practice (read: tonality). He states: "In condemning some Figures by Corelli, we do not claim to thereby condemn his Works. On the contrary, we have chosen them from all Works that are among the best in the matter of Harmony in order to make known that reason and Ear do not always agree among Musicians..."[73] Corelli's "fit" with Rameau's system indicates that Corelli's work exemplified the values of the new tonal system, and Rameau's own influence on the development tonality gave considerable credence to the idea of Corelli's work as tonal examples.

With Corelli as its most reliable yet unknowing proponent, tonality seamlessly integrated into the general trend of music into the eighteenth century. Contemporaneously with instrumental music, Italian opera in the 1680s assumed increasingly tonal albeit constricted

[72] Taruskin, Vol. 2, 198-203.
[73] Lester, *Compositional Theory in the Eighteenth Century*, 318.

structures such as those of Alessandro Stradella.[74] By around 1710, Italian *opera seria* had crystallized, and the aria grew in length to assume its standardized *da capo* form. Tonality efficiently accommodated the length and contrast characteristic of the *da capo*—which now expressed not one, but two "affects."[75] The compatibility of tonal structures with *opera seria* represents the agreement on a higher level between tonality and growing Enlightenment ideals. In its settings of libretti about idealized ancient rulers, *opera seria* glorified reason and its political manifestation in Enlightened despotism.[76] What better device on which to articulate these values than tonality, which theorists like Rameau saw as the musical embodiment of reason?[77]

Conclusion

Once tonality was integrated, it provided an infinitely versatile syntax for composers across nationalities, genres, and centuries to manipulate. Bach fugues, Haydn symphonies, Chopin ballades, and Wagner operas all, in one way or another, utilize the tension and resolution facilitated by the tonic and dominant. Even in *Prelude to the Afternoon of a Faun* (1894), a sound alien to a Corellian sonata, Debussy relies on notions of tonal stability. While he does so by eluding it almost entirely, he gratifies the listener with one fleeting V-I cadence in the home key at the very end.

The popularization of monody at the turn of the seventeenth century and its initiation of an increasingly harmonic view of music, coupled with composers' development of tonal structural organization and directed harmonic progressions, seems a deliberate and natural

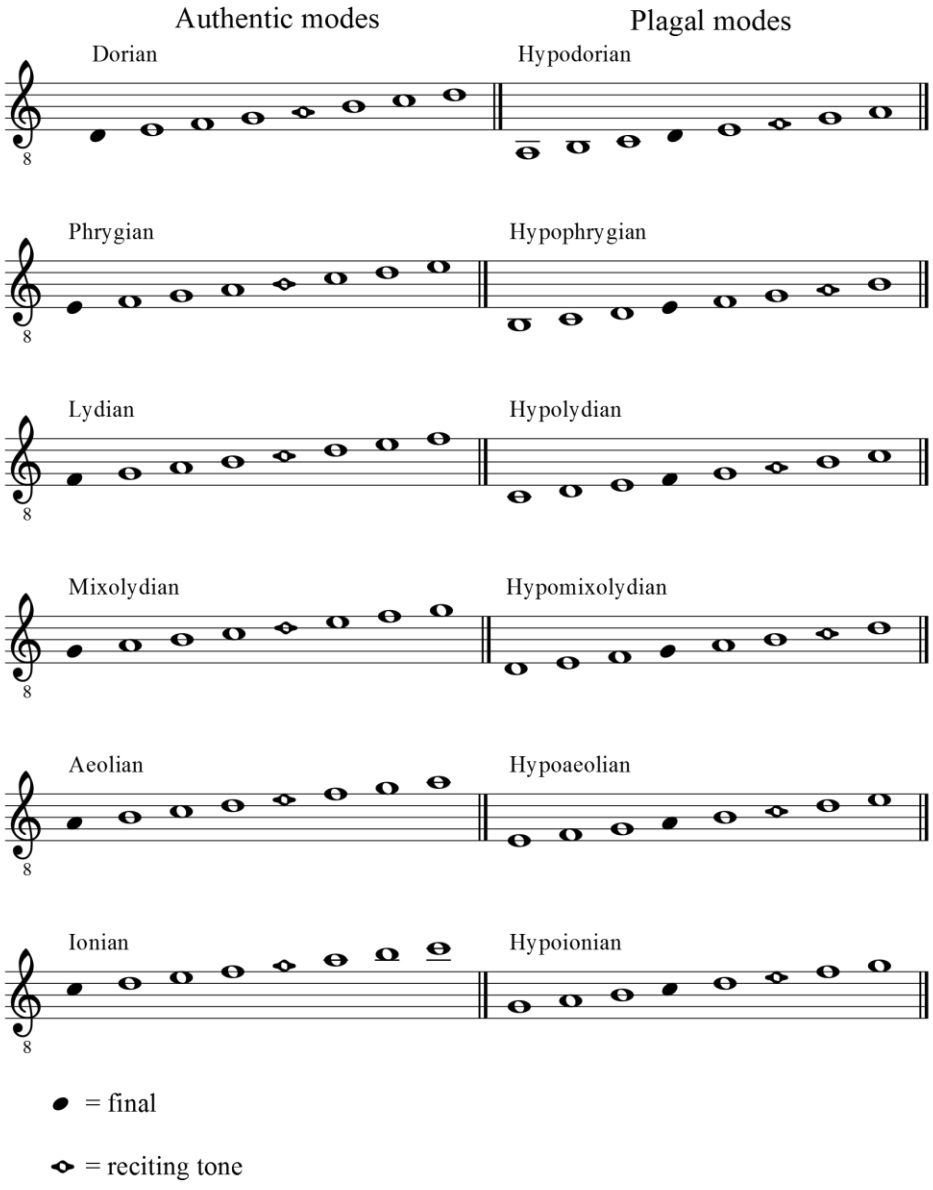
[74] Burnett and Nitzberg, 107.
[75] Burnett and Nitzberg, 112.
[76] Schulenberg, 161-62.
[77] Susan McClary, "Towards a History of Harmonic Tonality," 117.

machination on history's part. To McClary, the shift was a social choice, not an inevitable progression to something supposedly more natural. The secular elite of the Enlightenment purposely weaned out an old religious mysticism and, with it, the modal system well-suited to its expression.[78] But perhaps some things *are* just natural, or at least naturally attractive. Tonality has held its supremacy since 1700, surviving deliberate attempts at its eradication between 1900 and 1970. Since then, it has emerged reinvigorated and does not seem to be vanishing anytime soon.

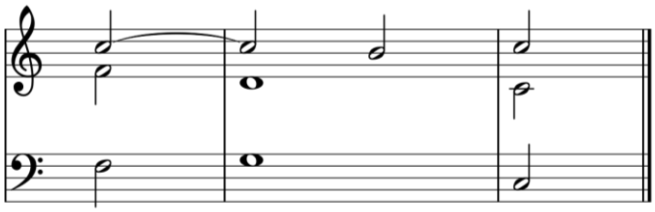
[78] McClary, "Towards a History of Harmonic Tonality," 115-117.

Examples and Tables

Ex. 1. The twelve modes, from Joel Lester, *Between Modes and Keys* (xiii-xiv)



Ex. 2. Traditional *clausula formalis*, from Carl Dahlhaus, *Studies on the Origin of Harmonic Tonality* (107)



Ex. 3. Giovanni Pierluigi da Palestrina, *Kyrie* from *Missa Aeterna Christi Munera* (1590)

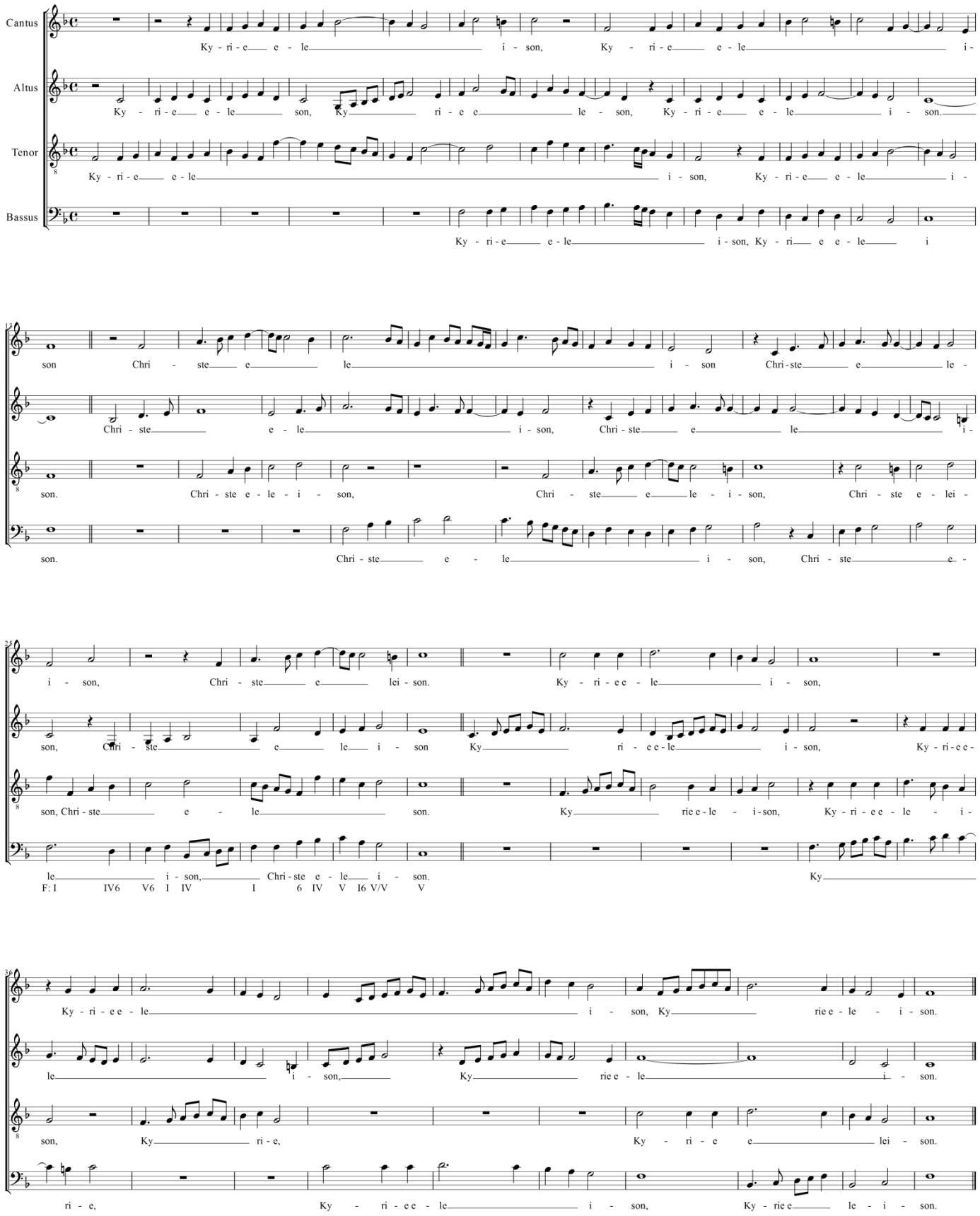
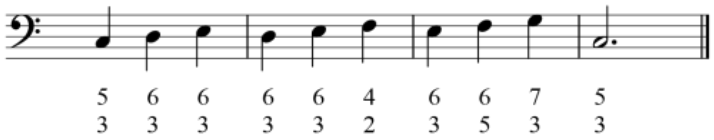


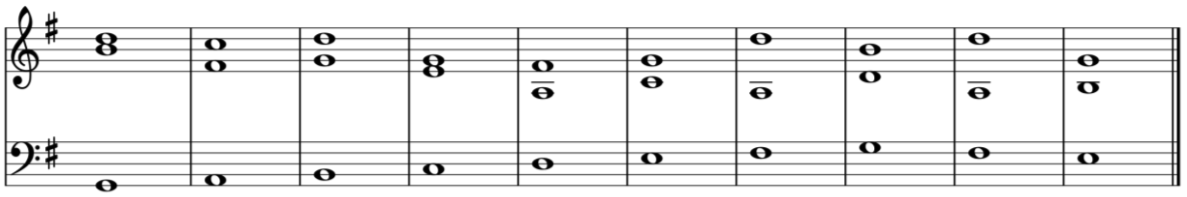
Table 1. Descending circle-of-fifths sequence in C major

C	F	b	E	a	d	G	C
I	IV	vii^{o}	iii	vi	ii	V	I

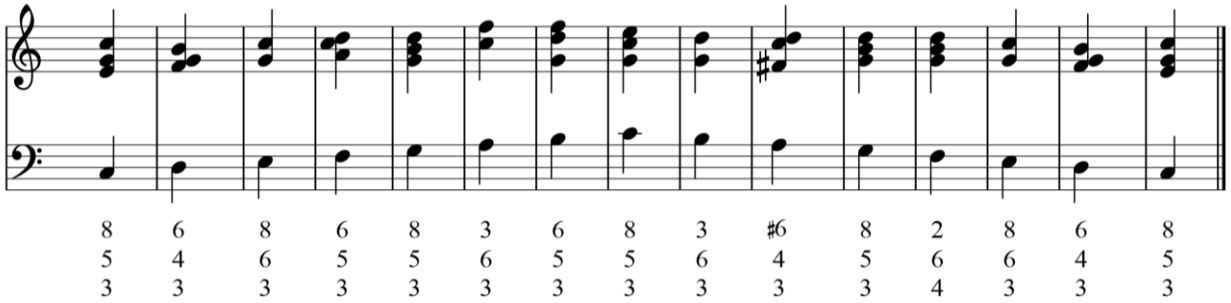
Ex. 4. Common thoroughbass patterns, from Joel Lester, "Thoroughbass as a Path to Composition," *Towards Tonality: Aspects of Baroque Music Theory* (150)



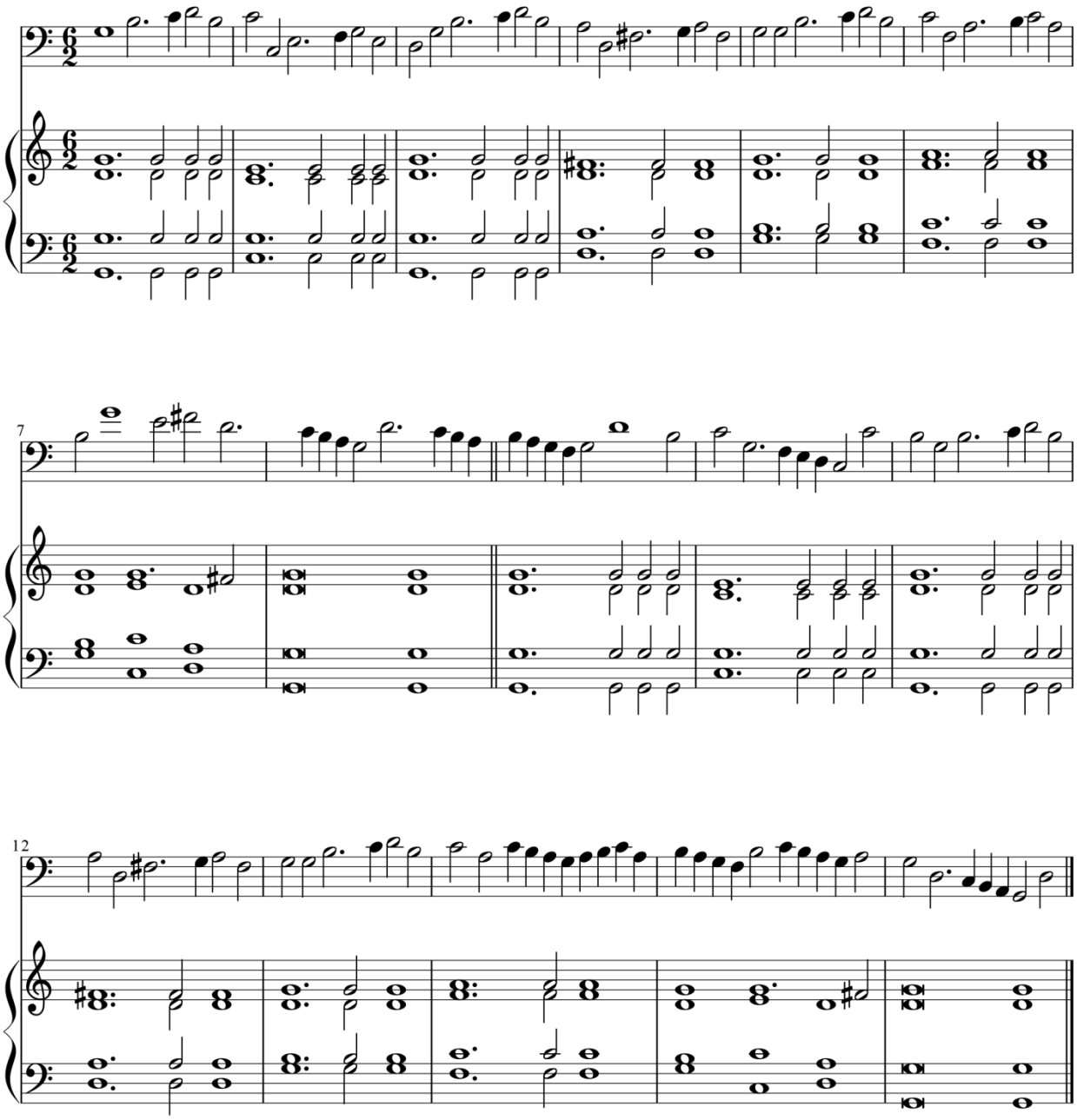
Ex. 5. Antonio Bruschi, "Consonanze per le otto corde del tuono maggiore," *Regole per il contrapunto e per l'accompagnatura* (1711), from Gregory Barnett, "Tonal organization in seventeenth-century music theory," *Cambridge History of Western Music Theory* (442), (condensed from three to two staves)



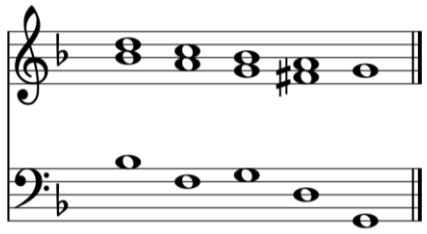
Ex. 6. Thomas Campion, "Rule of the Octave," from Joel Lester, "Thoroughbass as a Path to Composition," *Towards Tonality: Aspects of Baroque Music Theory* (151)



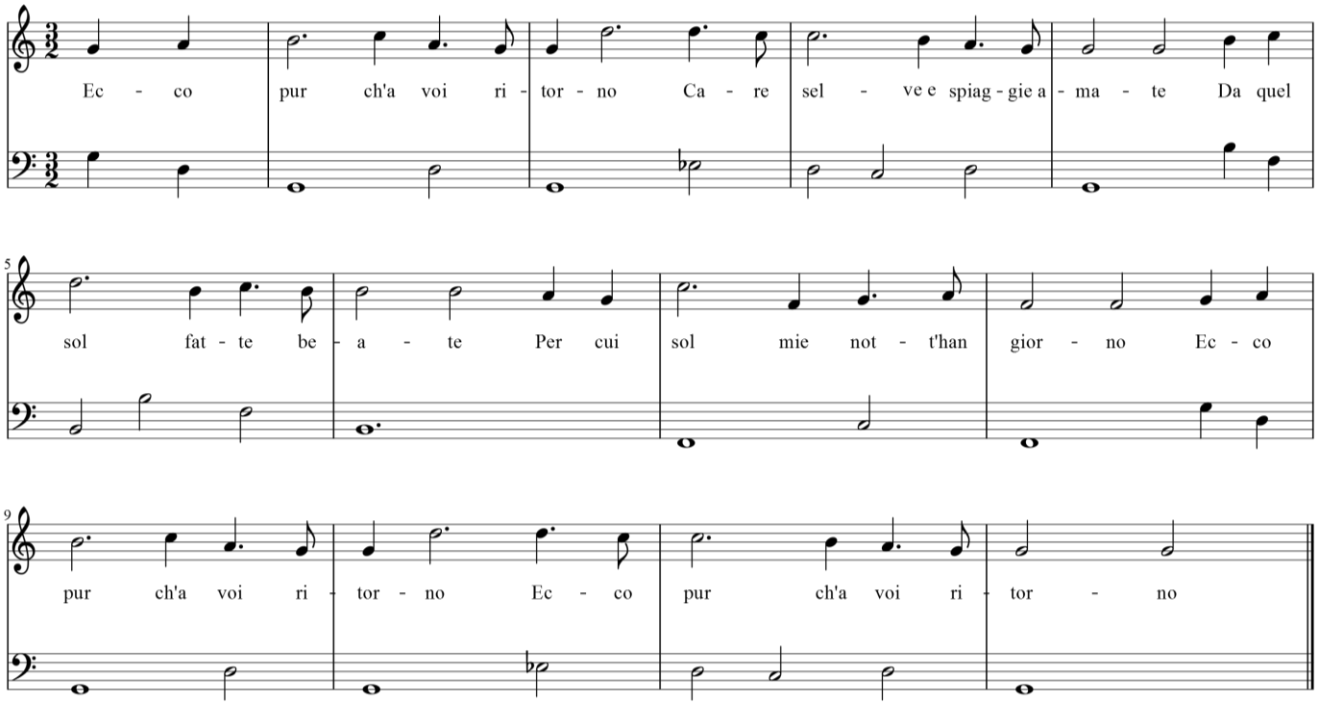
Ex. 7. Diego Ortiz, *Recercada segunda* on the *passamezzo moderno* (1553), from Richard Taruskin, *Oxford History of Western Music,* Vol. 1 (627)



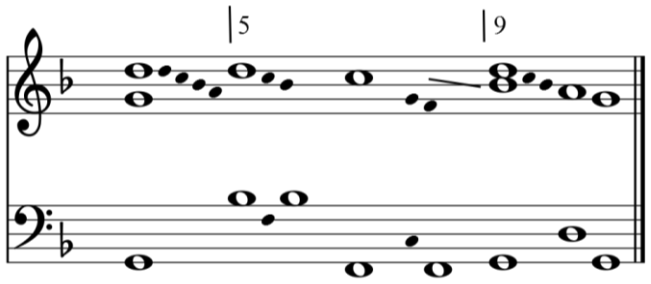
Ex. 8. Stepwise descent through the species of fifth (with "one-to-one" relationship between melody and harmony), from Susan McClary, *The Transition from Modal to Tonal Organization in the Works of Monteverdi* (9)



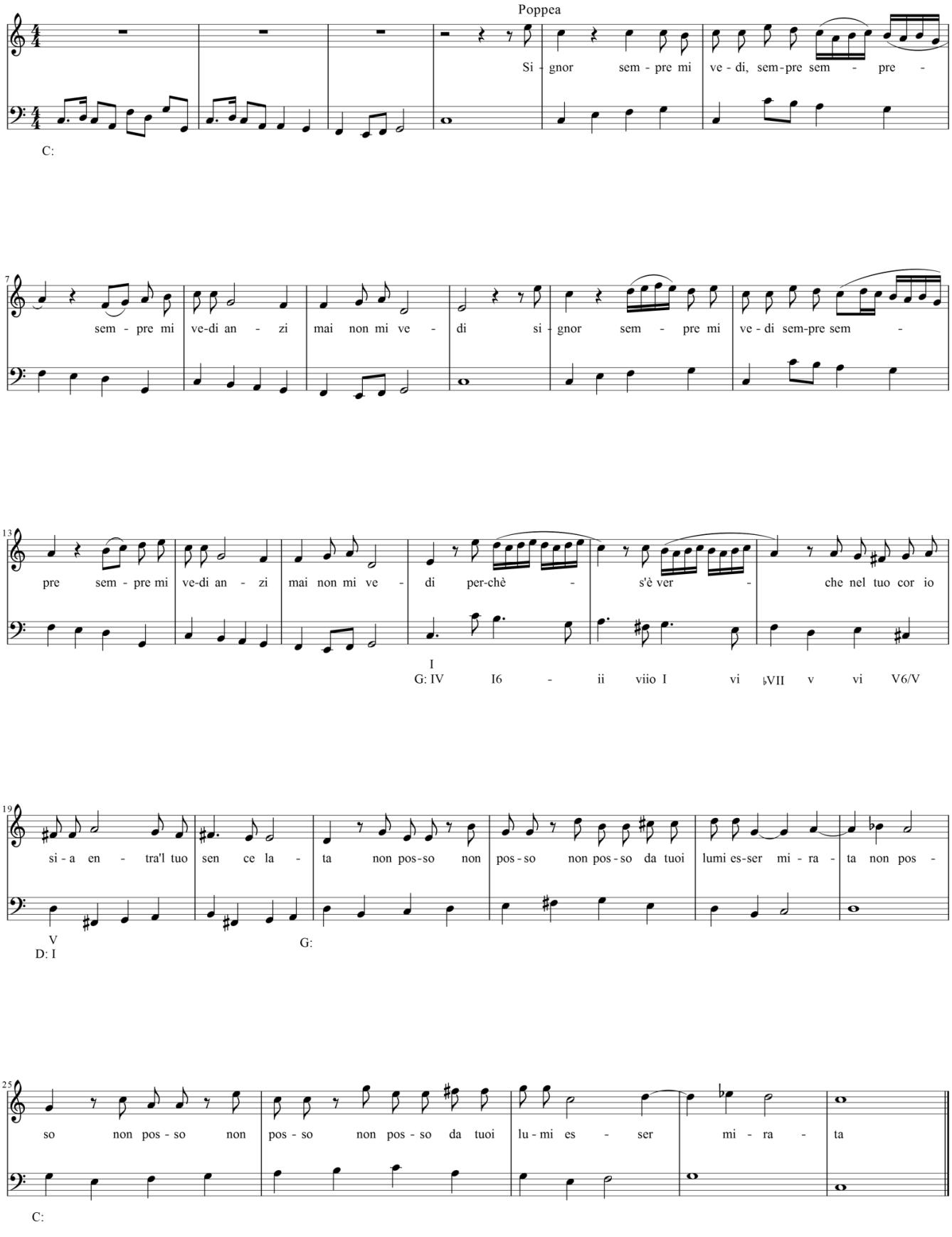
Ex. 9. Claudio Monteverdi, "Ecco pur," from *L'Orfeo* (1607)



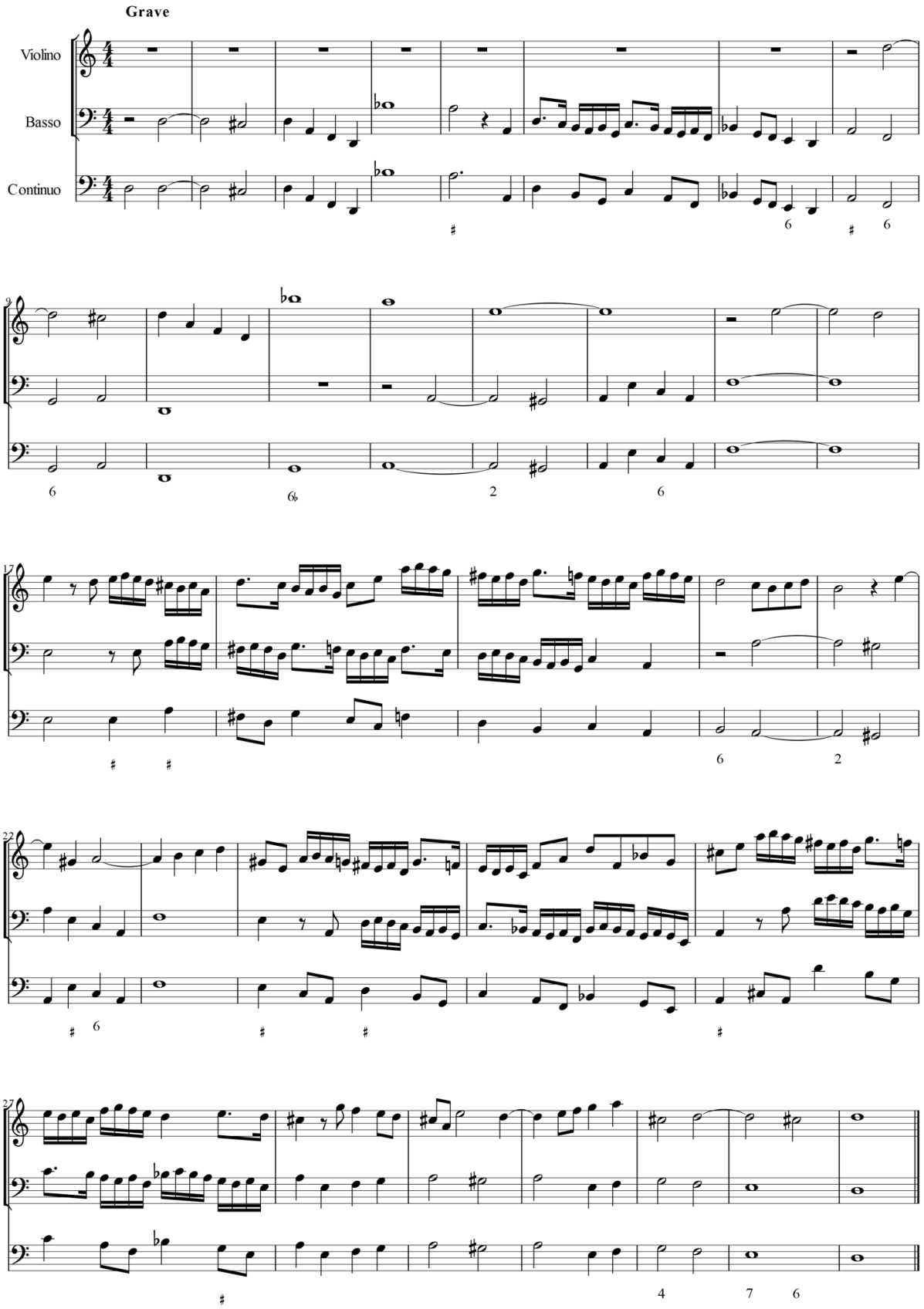
Ex. 10. Tonal plan for "Ecco pur," from Susan McClary, *The Transition from Modal to Tonal Organization in the Works of Monteverdi*



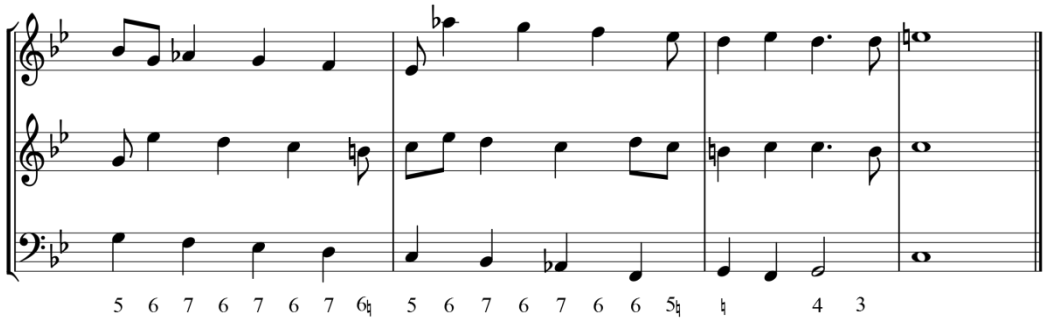
Ex. 11. Claudio Monteverdi, “Signor, sempre mi vedi,” from *L’incoronazione di Poppea* (1642)



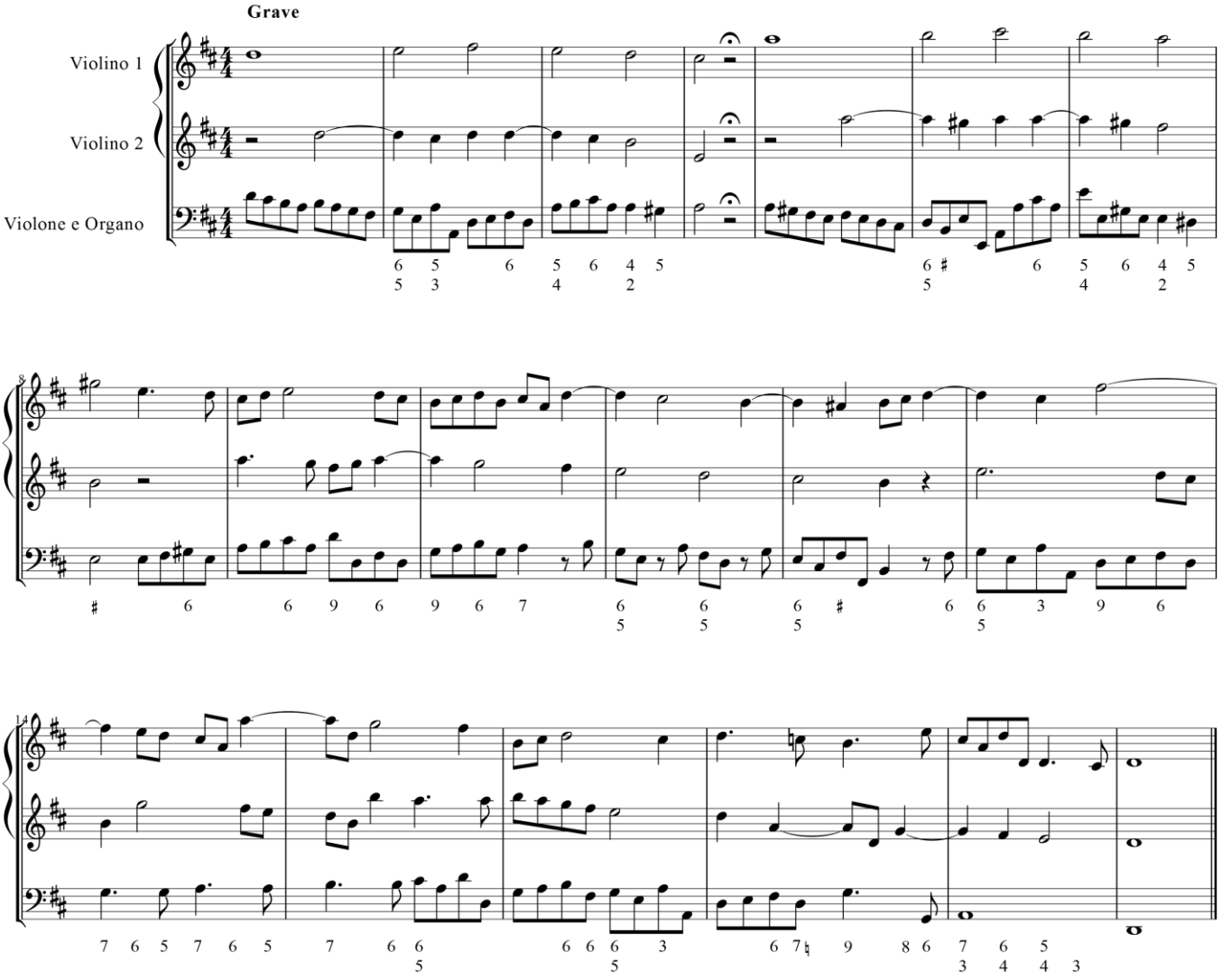
Ex. 12. Biagio Marini, Sonata Op. 22 No. 1 (1655), *Prima parte*, from Henry Burnett and Roy Nitzberg, *Composition, Chromaticism, and the Developmental Process* (99)



Ex. 13. Giovanni Battista Vitali, Sonata 8 *a2* (1667), from Peter Allsop, *The Italian 'Trio' Sonata* (300)



Ex. 14. Arcangelo Corelli, Sonata Op. 3 No. 2, I. *Grave* (1689)



Ex. 15. Arcangelo Corelli, Sonata Op. 3 No. 1, IV. *Allegro* (1689)

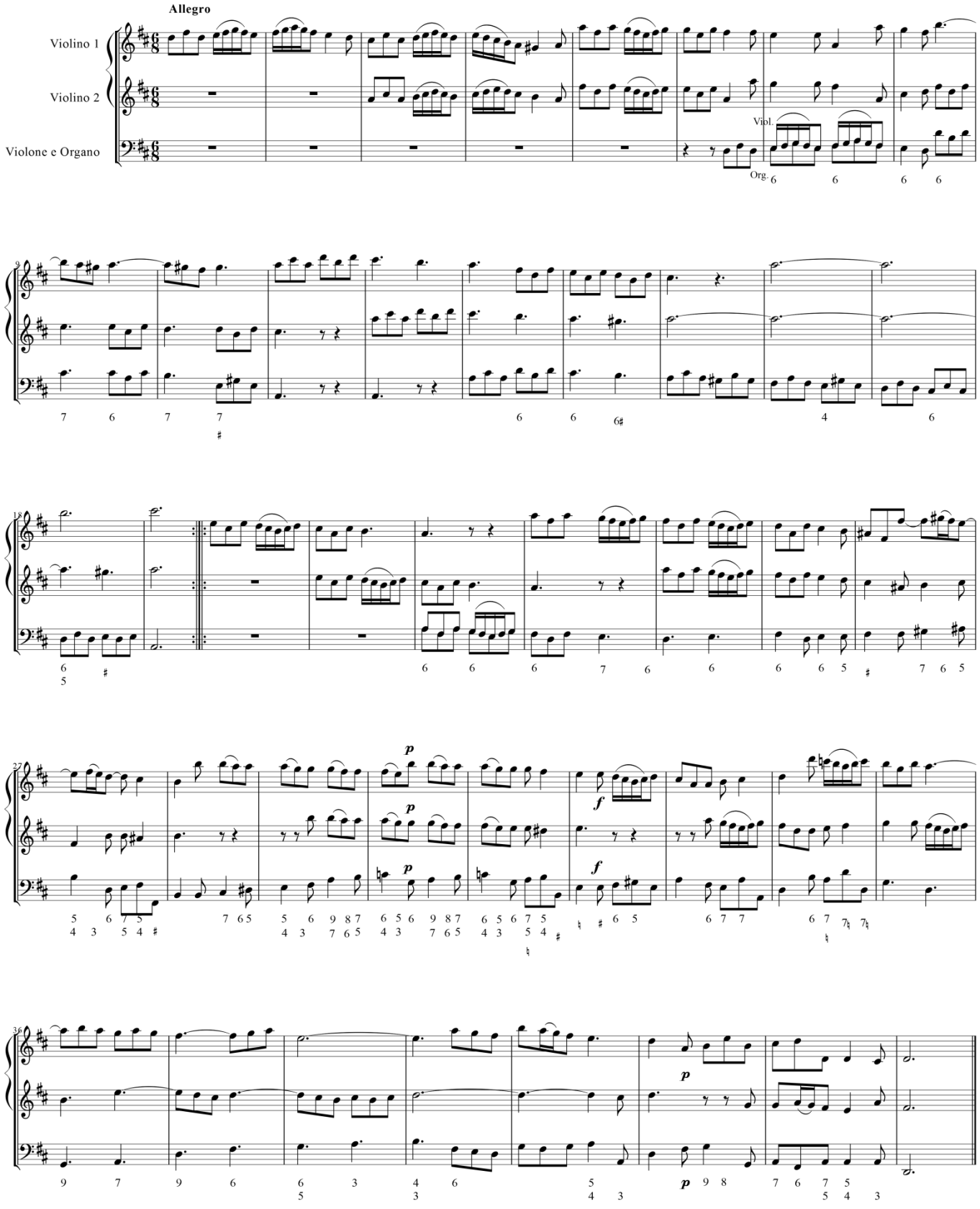


Table 2. Tonal progression in Corelli, Sonata Op. 3, No. 2, IV. *Allegro*

Measures	**Tonal outline**
1 - 8	Statement of theme in key of D (I)
8 – 11	Sequence and cadence to A using E^7 (V7/V)
11 - 19	Statement of theme variant in key of A (V)
20 - 26	Starting with an inversion of the theme in the dominant key, a return to key of D ending in a half cadence on F-sharp major (V^7/vi)
26 - 28	Brief movement to B minor (vi)
28 - 32	Brief movement to E minor (ii) with B minor triad (vi) recast as B major triad (V/ii)
33 - 43	Return to key of D (I) via authentic cadence on A (mm. 32-33)

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